APHIS – Plant Protection and Quarantine
California Department of Food and Agriculture
Weekly Situation Report: Light Brown Apple Moth (LBAM)
February 22, 2008

Updates in red

Survey and Diagnostics Information (Updated February 15, 2008):

Counties	Survey		Diagnostics	
	Number of Traps	Presumptive Positive	Confirmed Positive	
			This Week	Total
Alameda	2,678	0	1	448
Amador	0	0	0	0
Butte	209	0	0	0
Calaveras	0	0	0	0
Colusa	27	0	0	0
Contra Costa	1,547	0	3	154
Del Norte	107	0	0	0
El Dorado	77	0	0	0
Fresno	808	0	0	0
Humboldt	0	0	0	0
Imperial	222	0	0	0
Kern	498	0	0	0
Kings	133	0	0	0
Lake	0	0	0	0
Los Angeles	4,958	0	0	1
Madera	217	0	0	0
Marin	1,107	0	0	92
Mariposa	53	0	0	0
Mendocino	28	0	0	0
Merced	294	0	0	0
Monterey	3,498	0	7	1,019
Napa	1,004	0	0	2
Orange	1,705	0	0	0
Placer	73	0	0	0
Plumas/Sierra	6	0	0	0
Riverside	1718	0	0	0
Sacramento	56	0	0	0
San Benito	94	0	0	0
San Bernardino	1,169	0	0	0
San Diego	2,430	0	0	0
San Francisco	158	0	2	4,214
San Joaquin	756	0	0	0
San Luis Obispo	446	0	0	1
San Mateo	2,665	0	0	110
Santa Barbara	416	0	1	1
Santa Clara	4,462	0	1	24
Santa Cruz	3,534	0	84	10,944
Shasta	197	0	0	0
Siskiyou	298	0	0	0
Solano	1,447	0	0	9
Sonoma	613	0	0	0
Stanislaus	259	0	0	0

Sutter	*110*	*0*	*0*	*0*
Tehama	*60*	*0*	*0*	*0*
Trinity	*79*	*0*	*0*	*0*
Tulare	*705*	*0*	*0*	*0*
Tuolumne	*0*	*0*	*0*	*0*
Ventura	*546*	*0*	*0*	*0*
Yolo	*171*	*0*	*0*	*0*
Yuba	*46*	*0*	*0*	*0*
Total	*41,684*	*0*	*99*	*17,019*

- **Survey**
  - Survey teams continue to implement a rigorous detection and delimiting survey for the light brown apple moth (LBAM), *Epiphyas postvittana*, in 51 counties.

  - A total of 41,684 pheromone-baited traps are placed in and around retail and production nurseries, at ports of entry, and in the open environment and are being inspected bi-weekly. Some of the traps were removed during the winter months and will be placed again in the spring.

  - Visual inspections of all nurseries located within 1.5 miles from any traps with confirmed LBAM are conducted for the presence of any life stages.

- **Identification and Diagnostics**
  - A total of 17,019 moths have been confirmed to date as LBAM. Most of the captures (99%), however, are from traps located in two specific geographical areas. The first area, representing 71% of all LBAM captures, encompasses southern Santa Cruz and northern Monterey counties. The second area, which represents approximately 28% of captures, includes contiguous portions of northwest Alameda, western Contra Costa, and northern San Francisco counties. The remaining 1% came from mostly single trap captures in Los Angeles, Marin, Napa, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, and Solano counties.

  - LBAM immature life stages, including larvae and pupae have been found in a total of 53 nurseries, cut flower or greenery farms in Contra Costa, Marin, Monterey, San Francisco, San Mateo, Santa Clara, and Santa Cruz counties. Infested nurseries have the option to treat and be re-inspected as part of the regulatory requirements.

Operational Update:

- **Technical Working Group (TWG)**
  - The TWG met on December 13 and 14 in San Diego to review program progress and make recommendations designed to provide short and long-term plans to contain, control, and eradicate LBAM in California.
  - A field trial designed to measure the efficacy of several pheromone formulations is underway in New Zealand. Data from the trial will be used to select the most efficacious and suitable pheromone formulations for the 2008 program activities.

- **Incident Command**
  - A total of 171 personnel are on-site (124 Counties and CDFA; and 47-APHIS) assuming various roles within the ICS structure.

- **Regulatory Actions**
  - CDFA, APHIS, and County personnel continue to conduct inspections and certification of host commodities in the quarantine areas as required by State LBAM regulations and by the Federal Quarantine Order.
  - To date, a total of 506 compliance agreements have been issued to establishments located within the quarantine area requiring regular inspections of all nursery stock and other host materials.

- **Trace-back and Trace-forward**
  - Trace-back and trace-forward investigations to determine the source and potential distribution of LBAM continue, including the inspection of nursery establishments.

- **Treatment**
  - Nurseries with host plants that are confirmed as infested with LBAM larvae or pupae have the option of treating with Chlorpyrifos or destroying infested plants.
  - To date, three ground applications of *Bacillus thuringiensis* (Bt) have been made in Oakley (141 properties) and Napa (71 properties).
  - Hand-applied pheromone applications of Isomate-LBAM (twist-ties) have also been made in Oakley, Napa, Danville, Dublin, San Jose, Sherman Oaks, and Vallejo/Mare Island.
  - Aerial applications of the pheromone Checkmate OLR-F in Marina, Seaside, Sand City, Del Rey Oaks, Monterey and Pacific Grove areas of Monterey County were implemented on September 9-13, with approximately 36,500 acres having been treated. The second round of applications, using Checkmate LBAM-F, was completed on October 27, 2007.
  - Aerial applications were also completed in North Salinas/Boronda and the Prunedale/Royal Oaks areas on November 11, 2007. This concludes aerial pheromone applications for the LBAM in 2007.

- **Environmental Assessment and Monitoring**
  - The Programmatic Environmental Assessment conducted for the LBAM mating disruption (pheromone) program was posted on the APHIS website on February 14, 2008. Public comments will be welcomed to thirty days.

Trade Update:

- On May 24, Mexico suspended importation of certain LBAM host crops commodities – primarily fruits and nursery stock – from the quarantined counties in California and Hawaii and has required additional inspection and certification of commodities originating from outside quarantined counties.
- The Canadian Food Inspection Agency (CFIA) announced on Friday June 15 its LBAM requirements for host commodities exported to Canada. Details of the requirements are posted on the CFIA website at http://www.inspection.gc.ca/english/plaveg/pestrava/lbampbpp/lbampbppe.shtml

Communication and Outreach:

- CDFA and APHIS public information officers continue to provide information and field questions regarding the 2008 LBAM program plans in California.
- Legal notice announcing availability of the Environmental Assessment for the Light Brown Apple Moth in California was published in several California newspapers on February 14, 2008.

Background:

- On February 6, 2007, a private citizen near Berkeley in Alameda County, California, reported that two suspect moths had been captured in a blacklight trap on his property.
- In response, pheromone-baited traps were placed on March 1, 2007, in Alameda and Contra Costa counties. Trap inspections began March 7, 2007.
- On March 16, 2007, the ARS Systematic Entomology Laboratory (SEL) in Washington, DC, confirmed through morphological testing that the two samples submitted were, in fact, LBAM.
- APHIS and CDFA issued press releases on March 22, 2007, announcing the confirmation of LBAM in California. Also, APHIS issued a SPRO letter informing States and stakeholders of the LBAM in California.
- CDFA established on April 20, 2007 a LBAM quarantine of at least 182 square miles in Alameda, Contra Costa, San Francisco, Marin and Santa Clara counties. The quarantine is expected to expand to include Monterey, Santa Cruz and San Mateo counties.
- APHIS issued a LBAM Federal Quarantine Order on May 2, 2007, requiring inspection and certification of all nursery stock and host commodities from eight counties in California, including Alameda, Contra Costa, Marin, Monterey, San Francisco, San Mateo, Santa Clara, and Santa Cruz counties.
- A Technical Working Group (TWG) consisting of subject matter experts from Australia, New Zealand, and the United States was established to provide APHIS and CDFA technical recommendations. The TWG toured the infested region on May 16 and concluded with a two-day meeting on May 17-18 in San Jose, California. Recommendations designed to provide short and long-term plans to contain, control, and eradicate LBAM in California were forwarded to APHIS and CDFA.
- The light brown apple moth (LBAM), *Epiphyas postvittana*, is a native pest of Australia and is now widely distributed in New Zealand, the United Kingdom, Ireland, and New Caledonia. Although it was reported in Hawaii in the late 1800s, the LBAM find in California is the first on the US mainland.
- LBAM has a host range in excess of 120 plant genera in over 50 families, including nursery stock, cut flowers, fruits, and vegetables.
- LBAM could cause an estimated $160 to $640 million annually in crop damage and control costs if it spreads to agricultural production area in the 11 affected counties and up to $2.4 billion in California.